

Approved by: the Vice-Chancellor

Decision date: 2022-05-23

Type of document: guideline

Valid from: date above

Period of validity: until further notice

Updated: annual assessment

Replaces/annuls: previous version from 2021-02-22, LTU-3448-2020

Model for the evaluation of research subjects

Luleå University of Technology

Last updated 2022-05-23, ref no LTU-1937-2022

Table of Contents

1. Background.....	3
2. Components of the evaluation model.....	3
2.1 A number of quantitative measurements.....	3
2.2 Self-assessment	5
2.3 Dialogues and identification of potential interventions needed	5
3. Description of the evaluation process.....	6
3.1 Annual reporting (all years).....	7
3.2 Evaluation year.....	8
3.3 Follow-up years	9
4. The model's connection to external review of research and research environments.....	10
5. Evaluation of the model.....	10
5.1 Indicator and process.....	10
5.2 Template for self-evaluation.....	10
Appendix I - Definition of indicator measurements and division of responsibilities.....	11
1.1 Definition of indicator measurements	11
1.2 Division of responsibilities.....	19
Appendix II - Templates for self-assessment of research subjects	20
Appendix III - Template for the final report for the evaluation of research subjects	22
Appendix IV – Flow chart.....	23

1. Background

All research subjects at Luleå University of Technology (LTU) are evaluated every third year. The purpose of the evaluation is to strengthen the university's research subjects and provide management with a clear overview of the university's research portfolio. This is achieved by highlighting success and bring attention to potential difficulties that research subjects may face. The internal screening of research and research environments that the model constitutes also provides a basis for decisions on external review.

This document outlines the components of the evaluation model and the accompanying work process. The model was developed in 2013 and implemented from 2014 (LTU-221-2012_15). The model has subsequently been developed by the addition of additional financial, personnel and publication measures (LTU-221-2012_25, LTU-3319-2016, LTU-3769-2019). Gender-segregated data on staff and doctoral students was introduced in 2016 (LTU-3319-2016). The definition of indicator has also been reviewed and revised, including the definition of publication measures, forms of subsistence for doctoral students, the number of budgeted full-time employees in teaching and the proportion of teachers with scientific/artistic competence (LTU-221-2012_25, LTU-3319-2016, LTU-4769-2019, LTU-3448-2020). The template for self-assessment has been revised and from 2020 self-assessments are mandatory (LTU-4769-2019, LTU-3448-2020). From 2022, the model was changed from a two-year to a three-year cycle, to provide additional time for interventions between assessments and to secure time for external reviews.

2. Components of the evaluation model

The model for the evaluation of research subjects is made up of three components: (1) a number of quantitative measurements, (2) a self-evaluation, and (3) dialogues and identification of required interventions.

2.1 A number of quantitative measurements

The indicators measured in the model are summarised in Figure 1. They highlight core aspects such as the research subjects' economy, the composition of staff within the research subjects, composition of the doctoral student group, the importance of the subject for education on first and second cycle levels, the subject's production of scholarly articles and artistic productions, and the number of annual doctoral degrees.

Some indicators (external funding, head of subject, staff with supervisor abilities, doctoral students with a PhD position at LTU, the total number of publications, the number of high quality publications and cost per published article¹) are evaluated with guidelines. The thresholds of the guidelines are based on the university's strategic policy measures for 2020, and the faculty boards' assessment of the minimum size of solid/healthy research environments.

¹ The cost per published article is only measured with guidelines for subjects belonging to the Faculty of Science and Technology. The colour-coding of the measure has been added to highlight if subjects with high external funding have few publications due to difficulties/or low priority in transferring results to scholarly articles. Within the Faculty of Humanities and Social Sciences there is little need to follow this measurement due to the general lower level of external funding.

Indicator Measurement	Guidelines		Colour marking			
	Tekn	Hum/Sam	Green	Yellow	Red	Hum/Sam
Conditions						
Economy						
Accumulated deficit/surplus (mnkr)	w/o guidelines					
Economic result (mnkr)	w/o guidelines					
External funding (€) volume (mnkr)	8 mnkr	4 mnkr	E ≥ 8	4 ≤ E < 8	E < 4	2 ≤ E < 4
Composition of the personnel group						
Numbers (n) per research subject						
Head of Subject	1	1	n = 1	n = 0	n = 1	n = 0
Number of accumulated full-time equivalents (excl. doctoral students)	w/o guidelines					♀ + ♂
Number of employees (excl. doctoral students)	w/o guidelines					♀ + ♂
Number of adjunct professors and guest professors	w/o guidelines					♀ + ♂
Proportion of teachers with scientific or artistic competence (%)	w/o guidelines					
Personnel with supervisory qualification (Prof/Bitrprof/Doc)	≥ 2.5	≥ 2.5	n ≥ 2.5	1 ≤ n < 2.5	n < 1	1 ≤ n < 2.5
Number of doctoral students per supervisor	w/o guidelines					
Number of doctoral students with doctoral position	≥ 8	≥ 5	n ≥ 8	5 ≤ n < 8	n < 5	3 ≤ n < 5
Number of doctoral students in company employment or other employment outside of the university	w/o guidelines					
Number of active doctoral students	w/o guidelines					♀ + ♂
Number of newly admitted doctoral students	w/o guidelines					
Number of budgeted full-time workers in teaching						
	w/o guidelines					
Results						
Scientific articles and artistic publications						
Total number (n) of publications*	10	6	n ≥ 10	7 ≤ n < 10	n < 7	4 ≤ n < 6
Number of high-rated publications*	5	3	n ≥ 5	1 ≤ n < 5	n < 1	1 ≤ n < 3
Publications per teacher with scientific or artistic competence	w/o guidelines					
Cost per published article (mnkr)	with guidelines for TFN		n ≤ 1	1 < n < 3	n ≥ 3	
Degrees in third cycle education The number of doctoral degrees (n)	≥ 1.5	≥ 1	n ≥ 1.5	n = 1	n = 0	n = 0.5
						n = 0

Figure 1: Indicators - Model for the evaluation of research subjects

* publications = scholarly articles or artistic productions

♀ + ♂ Reported data by gender (number of women + number of men)

The indicators measured with guidelines are displayed with a colour-marked outcome (according to traffic light coding): green flag if the target value is reached, red outcome on striking deviation, and yellow marking in between.

Definitions of the measurements and the distribution of responsibility for the reporting of indicators can be found in Appendix I.

2.2 Self-assessment

Heads of subjects are obliged to comment, in writing, on the indicator data. The purpose of this is to give the Heads of subjects the opportunity to bring complementary information to the fore, information that directly concerns the indicators measured. Particularly prestigious funding could, for example, be mentioned and reasons for a divergent publication level explained.

The self-assessment also includes a request to describe on the quality of the research, its relevance and impact (academic, industrial and/or societal), and the connection between research and education. The self-assessment also probes the subjects' renewal and contribution to the university's vision. The template for the self-assessment can be found in Appendix II.

2.3 Dialogues and identification of potential interventions needed

The final step in the evaluation process is the task of the faculty boards to make an overall assessment of the status of individual research subjects and identify any deficiencies that may need to be addressed. Dialogue between the chairs of the faculty boards and Heads of departments is an important step in this process. During the dialogues, all research topics are reviewed. The Research Strategy Committee's initial assessments, questions and proposals for possible measures are discussed and the Heads of departments' views on these are obtained. The Head of departments contribute with their knowledge of the subjects' conditions and challenges and the department's ongoing and planned initiatives for development. The dialogues thus provide complementary information for the Faculty Board's review and an opportunity to discuss proposals with the responsible Head of department, which is expected to lead to better informed decisions. In the case of the Faculty of Humanities and Social Sciences, the chairpersons of the faculty board also undertake a dialogue with each Head of subject. Individual dialogues between Heads of subjects and the chairpersons of the faculty board is not feasible within the Faculty of Science and Technology due to the large number of research subjects. Individual dialogues are arranged on a needs basis. The absence of direct dialogues between the chairpersons of the faculty boards and the Heads of subjects is partly compensated for by extended dialogues with the Heads of departments.

The research strategy committees compile the results and conclusions of the evaluation into a one report for each department. The reports contain a brief summary of the status of each research subject and some more general observations and feedback. The reports may also contain information about interventions needed and assignments for Heads of departments and Head of subjects to action. Deadlines for tasks and an outline of the consequences if tasks are not undertaken within the time-limit should be apparent from the final report. The template for the final report can be found in Appendix III.

The final report for the evaluation of research subjects is approved by the faculty boards and communicated to the Heads of departments and the university's operations controllers. Identified needs for action are then integrated into the university's planning process. The final reports and a summary with special focus on identified challenges and proposals for action are communicated to the Vice-Chancellor.

3. Description of the evaluation process

The evaluation of research subjects is undertaken in three-year cycles. The indicator data is compiled each year, but it is only during 'evaluation years' that the whole process with self-assessments and dialogues is undertaken. In the years between evaluation years (i.e. 'follow-up years'), the Heads of departments are required to report back on the actions taken in response to assignments given in the assessment report one or two years earlier.

Assignments from the evaluation process are addressed in the departments' operational plans for the coming year(s). The observations made during the evaluation also influence the plans for strategic investments at departmental and university level.

Below follows a more detailed description of the process. A flow-chart representation of the process can be found in Appendix IV.



Figure 2: Process description *) It is only within the Faculty of Humanities and Social Sciences that dialogues with Heads of subjects is part of the standard procedure.

3.1 Annual reporting (all years)

January

The various expert division within *Professional Services* (VSS) are responsible for the reporting of data for calculations of indicators. The data collected in January is data for the previous calendar year. For most indicators the deadline for reporting of data is the **31st of January**. The deadline for the financial measurements is, however, the 7th of February. The definition of measurements and division of responsibilities can be found in Appendix I.

The Education and Research Planning Unit is responsible for compiling reported quantitative data into one document per research subject, including:

- calculation of indicators that are share measurements
- colour-coding of quantitative indicator data with guidelines

February

- *Administrator Education and Research Planning* is responsible for the distribution of the quantitative indicator data to the Heads of departments. During evaluation years, the administrator is also responsible for distributing the template for Heads of subjects' self-assessments, to the Heads of departments. The indicator data should reach the Heads of departments and the faculty boards' research strategy committee by the **21st of February**.
- *The faculty board* (research strategy committee) receives the indicator data for the board's research subjects. Data from of the previous follow-up period must be available for comparison.
- *Heads of departments* receive the indicator data for the department's research subjects. The Head of department is requested to pass the indicator data on to each Head of subject. During evaluation years the Head of department is also asked to distribute the self-assessment template.

3.2 Evaluation year

March

- *The Head of department* is responsible for collecting quality assured self-assessments from Head of subjects and ensuring that the Faculty receives the self-assessments by **March 10th**.
- *Administrator Education and Research Planning* is responsible for relaying the self-assessments to the relevant research strategy committees.
- *The research strategy committees* make a preliminary assessment of the research subjects based indicator data and self-assessments. Issues to explore further in dialogues with Heads of departments and Heads of subjects are identified.
- *The chairpersons of the faculty boards* informs the Vice-Chancellor of the latest indicator data (data on the previous year).

April - May

- *The chairpersons of the faculty boards* and administrator *Education and Research Planning* undertake dialogues with the *Heads of departments* and *Heads of subjects* (Faculty of Humanities and Social Sciences). The dialogues with the Heads of departments includes a discussion of potential mergers, terminations of excising subjects and establishment of new research subjects.
- *The research strategy committees* summarize the status of each research subject (including any need for action) and provide a balanced assessment and analysis of each department's research portfolio. The assessment is drafted in accordance with the template for the final report for evaluation of research subjects, Appendix III.
- *The chairpersons of the faculty boards* discuss the conclusions drawn from the evaluation with the Vice-Chancellor and seek input on the proposals presented in the final report.

June

- *Education and Research Planning* ensures that the Heads of departments are invited to comment on proposals/tasks given in the draft of the final report.
- *The faculty boards* approve the final reports (one for each department) and serves the Heads of departments with potential tasks outlined in the report. The final reports are distributed to the Heads of departments and to the university's business controllers.
- *The Heads of departments* are responsible for passing on the board's statements (feedback and potential tasks) to the respective Head of subject.
- The final reports and a summary with special focus on identified challenges and proposed actions are communicated to the Vice-Chancellor.

June - August

- The final report serves as input to the university business controllers' development of the overall prerequisites for the university's operational planning for the next year(s).

September – December

- Based on recommendations in the final report, Heads of departments develop strategies to improve the condition/performance of research subjects.
- *The Vice-Chancellor* has a dialogue with the Head of department prior to making decisions about the department's undertakings for the coming year(s). The dialogue ensures that the departments' proposals for the operational plan take into account the needs for action presented in the final report for the evaluation of research subjects.
- *The research strategy committees* evaluate whether any changes should be made to the model for evaluation of research topics prior to the next evaluation cycle.

3.3 Follow-up years

February

- *The research strategy committees* take note of the Vice-Chancellor's decision on the Departments operational plans and thus the Head of departments' planned regarding research subjects.

March

- *The research strategy committees* analyse the new set of indicator data and the latest development.
- *Administrator Education and Research Planning* requests feedback from the Heads of departments on the action points raised in the 'Final report on evaluation of research subjects' (the report from the previous evaluation year). Additional questions based on the latest indicator data may be included.

April - May

- *The Heads of departments* report, in writing, on the measures taken in response to the 'Final report on evaluation of research subjects' and respond to potential additional questions. In their reports, the Heads of departments are required to raise plans for new research subjects and plans for alterations of existing subjects.
- *The research strategy committees* debate the heads' reports on actions taken since last year and assess the potential need for additional measures.
- *The chairpersons of the faculty boards* inform the Vice-Chancellor on the reports from the Heads and obtain input on suggestion for further measures.

June

- *The faculty boards* processes the Heads of departments' feedback and can, in the event of a deviation/need, instruct the Heads of departments to take additional measures. The faculty boards' report and decisions are communicated to Heads of departments and the university's business controllers to take into account in future planning. The Vice-Chancellor is also notified about the faculty boards' decisions.

June - August

- The June report serves as input to the university business controllers' development of the overall prerequisites for the university's operational planning for the next year(s).

September – December

- *The Heads of departments* consider the feedback given on the reporting on actions taken in response to the evaluation of research subjects last year, when developing the department's operational plan for next year.
- *The Vice-Chancellor* has a dialogue with the Head of department before deciding on the department's operational plan for the coming year(s). The dialogue ensures that the department's proposals for the operational plan take into account the needs for action presented in the feedback on the evaluation of research subjects.
- *The Research Strategy Committees* evaluate whether any changes should be made to the model for evaluation of research subjects prior to the next evaluation cycle.

4. The model's connection to external review of research and research environments

The university's quality system for research must ensure that research environments / research regularly undergo evaluation in a national and international perspective with the support of peer review, in order to identify strengths, weaknesses and development opportunities. There is a separate guideline for external review that outlines the general principles for selection, scope and division of responsibilities (LTU-1377-2021). The university's internal evaluation of research subjects (described in this document) forms a basis for decisions on selection of environments (research subjects or other research environments) to examine. The evaluation of research subjects also provides a basis for specifying the purpose of a specific review assignment.

5. Evaluation of the model

5.1 Indicators and process

After each round of evaluation, an assessment is made as to whether any adjustment of the 'Model for evaluation of research topics' should be made before the next evaluation cycle. The faculty boards evaluate the process, the composition of indicators and the guidelines (level) of the colored indicators. The need for revision is also assessed against external guidelines for quality assurance of research. Any proposals for revisions are weighed against the need to ensure continuity in the follow-up and enable analysis of development over time.

If deemed justified, the faculty boards propose a revision of the 'Model for evaluation of research subjects' for approval by the Vice-Chancellor.

5.2 Template for self-evaluation

Prior to each evaluation round, the faculty boards evaluate the previous template for self-evaluation and set the questions for next evaluation cycle. The template (self-evaluation questions) is established no later than the January evaluation year.

Appendix I - Definition of indicator measurements and division of responsibilities

1.1 Definition of indicator measurements

INDICATORS Economy

MEASUREMENT Accumulated surplus or deficit

Measurement	Accumulated surplus or deficit
Unit of measure	SEK millions
Formula	Balanced result
Definition of the formula input factors	The items "Change in capital according to the income" (account 2090) and "Balanced change in capital" (account 2070). All costs and revenues that are not posted on specific research topics (e.g. the activities of the Centers of Excellence) are distributed on a standard basis between participating research topics, if relevant.
Measurement time	At the annual accounts (31/12)
IT system	Agresso
Responsibility for collecting the basic data included in the measurement and calculation of the measurement	Accounting and Financial Management Unit

MEASUREMENT Economic result

Measurement	Economic result for the year
Unit of measure	SEK millions
Formula	Change in capital
Definition of the formula input factors	Change in capital according to account 2090 All costs and revenues that are not posted on specific research topics (e.g. the activities of the Centers of Excellence) are distributed on a standard basis between participating research topics, if relevant.
Measurement time	At the annual accounts (31/12)
IT system	Agresso
Responsibility for collecting the basic data included in the measurement and calculation of the measurement	Accounting and Financial Management Unit

MEASUREMENT External funding volume

Measurement	Total external income in SEK million
Unit of measure	SEK millions
Formula	Total external research income = total of activity codes 30 and 39.
Definition of the formula input factors	External revenue accounts within 31*-39* Activity code 30 = grant funding Activity Code 39 = assignment financing All costs and revenues that are not posted on specific research topics (e.g. the activities of the Centers of

	Excellence) are distributed on a standard basis between participating research topics, if relevant.
Measurement time	At the annual accounts (31/12)
IT system	Agresso
Responsibility for collecting the basic data included in the measurement and calculation of the measurement	Accounting and Financial Management Unit

INDICATORS Composition of the personnel group

MEASUREMENT Head of subject

Measurement	Chaired professor
Unit of measure	Singular
Formula	Is the position of Head of subject filled?
Definition of the formula input factors	According the accounting code in salary statistics There is someone = Yes There is no one = No
Measurement time	Annual Accounts (31/12)
IT system	Primula
Responsibility for recording the basic data included in the measurement	Division of Human Resources
Data reporting	BI system

MEASUREMENT Number of employees

Measurement	Numbers of employees
Unit of measure	Quantity, integer
Formula	Number of individuals employed as per December 31. Data reported by gender.
Definition of the formula input factors	The measurement includes all personnel categories except the employment forms doctoral student and "forskningsassistent" (i.e. doctoral students post maximum employment time as DTJ).
Measurement time	Annual Accounts (31/12)
IT system	Primula
Responsibility for recording the basic data included in the measurement	Division of Human Resources
Data reporting	Division of Human Resources

MEASUREMENT Number of accumulated full-time equivalents

Measurement	Numbers of full time equivalents
Unit of measure	Number of accumulated full-time equivalents, one decimal
Formula	Number of employed full-time equivalents within the research subject. Accumulated data for the year. Data reported by gender.
Definition of the formula input factors	The measurement includes all personnel positions except the employment forms doctoral student (DTJ) and "forskningsassistent" (i.e. doctoral students post maximum employment time as DTJ). No minimal employment rate. However, sick leave beyond 15 days and all leave of absence is deducted (e.g. parental

	leave).
Measurement time	Annual Accounts (31/12) for period 1 jan- 31 dec.
IT system	Primula
Responsibility for recording the basic data included in the measurement	Division of Human Resources
Data reporting	BI system

MEASUREMENT **Number of adjunct professors and guest professors**

Measurement	Number of adjunct professors and guest professors
Unit of measure	Quantity, integer
Formula	Total number of employees with the post adjunct professor or guest professor. Data reported by gender.
Definition of the formula input factors	Position according to Primula (does <i>not</i> including those prefixed or suffixed assistant)
Generic follow-up measure²	Same definition as “Number of adjunct professors and guest professors”.
Measurement time	At the annual accounts (31/12)
IT system	Primula
Responsibility for recording the basic data included in the measurement	Division of Human Resources
Data reporting	BI system

MEASUREMENT **Personnel with supervisory qualification**

Measurement	Number of full year workers with supervisory qualification
Unit of measure	Full-year workers, one decimal
Formula	Number of employed full-year workers with the competence level docent or professor position (including associate/adjunct/guest), as per December 31.
Definition of the formula input factors	Includes individuals with the competence level docent and professors, including professors with prefix or suffix assistants, who performed <i>at least 0.51 year workers</i> within the subject during the measurement period. Also included are adjunct and guest professors (even with the prefix assistant) who have performed <i>at least 0.2 year workers</i> within the subject during the measurement period.
Generic follow-up measure	Same cut-off values as the generic follow-up measure “ <i>Proportion of research topics with high supervisor capacity</i> ”.
Measurement time	At the annual accounts (31/12)
IT system	Primula
Responsibility for recording the basic data included in the measurement	Division of Human Resources
Data reporting	BI system

² The generic follow-up measures are collated at departmental and university level three times a year (tertial 1, tertial 2 and at the end of the calender year).

MEASUREMENT Proportion of teachers with scientific or artistic competence

Measurement	Proportion of teachers with scientific or artistic competence
Unit of measure	Per cent, integer
Formula	[Proportion of teachers with doctoral degree <i>including</i> artistic senior lecturers/Total number of teachers]*100
Definition of the formula input factors	<i>Teacher</i> : according to the Appointments Procedure. <i>Teacher with doctoral degree</i> : All the above titles except lecturer, including titles with prefix or suffix adjunct or guest.
Generic follow-up measure	The same definitions as “Share of teachers with scholarly/artistic competence”.
Measurement time	Annual Accounts (31/12)
IT system	Primula
Responsibility for recording the basic data included in the measurement	Division of Human Resources
Data reporting	BI system

MEASUREMENT Number of doctoral students per supervisor

Measurement	Total number of active doctoral students per supervisor
Unit of measure	Quantity, integer
Formula	The measure "Number of active doctoral students" / Number of employees with the level of competence Associate Professor or Professor
Definition of the formula input factors	Doctoral students: Total numbers according to definition of the measurement “Number of active doctoral students”. Supervisors: Number of employees with the level of competence Associate Professor or Professor (including prefix or suffix assistant, adjunct or guest). Only those who performed <i>at least 0.51 year workers (0,2 adj/guest)</i> within the subject during the <i>measurement</i> period are included.
Measurement time	Annual Accounts (31/12)
IT system	Ladok + Primula
Responsibility for recording the basic data included in the measurement	Number of doctoral students – Unit for Local Administration EKTS/HLT/SBN/SRT/TVM Number of supervisors – Division of Human Resources
Data reporting	BI system

MEASUREMENT Number of doctoral students with doctoral position at LTU

Measurement	Number of doctoral students with doctoral position at LTU
Unit of measure	Quantity, integer
Formula	All active doctoral students with the financing form DTJ, goal doctoral degree.
Definition of the formula input factors	All doctoral students with financing form DTJ, goal doctoral degree. The measurement includes those students with recorded activity and $\geq 50\%$ financing through DTJ (if 50% of the financing is DTJ then 0,5

	will be reported, if >50% of the financing is DTJ then 1 will be reported). The reporting is based on data registered in Ladok for term 2.
Measurement time	Annual Accounts (31/12)
IT system	Ladok
Responsibility for recording the basic data included in the measurement	Unit for Local Administration EKTS/HLT/SBN/SRT/TVM
Data reporting	BI system

MEASUREMENT Number of doctoral students in company employment or other employment outside of the university

Measurement	Number of doctoral students with company employment or other external employment
Unit of measure	Quantity, integer
Formula	All active doctoral students with financing form FTG, USL or AUH, goal doctoral degree
Definition of the formula input factors	All doctoral students with financing form FTG, USL or AUH with goal doctoral degree. The measurement includes those students with recorded activity and $\geq 50\%$ financing through FTG and or AUH/USL (if 50% of the financing is FTG/AUH/USL then 0,5 will be reported, if >50% of the financing is FTG/AUH/USL then 1 will be reported). The reporting is based on data registered in Ladok for term 2.
Measurement time	Annual Accounts (31/12)
IT system	Ladok
Responsibility for recording the basic data included in the measurement	Unit for Local Administration EKTS/HLT/SBN/SRT/TVM
Data reporting	BI system

MEASUREMENT Number of active doctoral students

Measurement	Total number of active doctoral students
Unit of measure	Quantity, integer
Formula	Total number of doctoral students with registered activity. Data reported by gender.
Definition of the formula input factors	Total number of doctoral students with the goal doctoral degree and activity >0% during term 2.
Measurement time	Annual Accounts (31/12)
IT system	Ladok
Responsibility for recording the basic data included in the measurement	Unit for Local Administration EKTS/HLT/SBN/SRT/TVM
Data reporting	BI system

MEASUREMENT Number of newly admitted doctoral students

Measurement	Number of newly admitted doctoral students
Unit of measure	Quantity, integer
Formula	Total number of newly admitted doctoral students
Definition of the formula input factors	Number of doctoral students admitted during the calendar year (January - December), goal doctoral degree

Measurement time	Annually (31/12)
IT system	Ladok
Responsibility for recording the basic data included in the measurement	Unit for Local Administration EKTS/HLT/SBN/SRT/TVM
Data reporting	BI system

INDICATOR Subject's importance for first and second cycle education

MEASUREMENT Number of budgeted full-time workers in teaching

Measurement	Number of budgeted full time workers in teaching in first cycle and second cycle
Unit of measure	Full-year workers, one decimal
Formula	Total number of budgeted full-time workers in teaching.
Definition of the formula input factors	Budgeted full-time workers for <i>current</i> measurement year (e.g. data reported by 31/12/2012 is budgeted full-time workers for 2012). All employees regardless of position held (including time programme management).
Measurement time	Annually (31/12)
IT system	- No uniform system for recording this data exists. The Unit for Local Administration at each department is responsible for producing the data.
Responsibility for collating the basic data included in the measurement	Unit for Local Administration EKTS/HLT/SBN/SRT/TVM
Data reporting	Accounting and Financial Management Unit

INDICATOR Scientific articles and artistic publications

MEASUREMENT Total number of publications

Measurement	Total number of articles and artistic productions
Unit of measure	Quantity, integer
Formula	Number of publications and artistic productions with approved economic remuneration.
Definition of the formula input factors	Number of articles in peer reviewed international journals and publication series that are available in the Danish and Norwegian authority lists of approved journals, or in Web of Science, and artistic productions approved according to FFN's criteria. Conference papers are not included.
Generic follow-up measure	The measure includes the same selection of publications / productions as the generic follow-up measure "Number of eligible articles and artistic productions". Note however: In the event of co-publication between subjects, each subject is assigned a whole point <i>unlike</i> in the resource allocation system where articles written across department boundaries are assigned part-points.
Measurement time	Annually (publications registered up until 1/12, i.e. including articles from the 2/12 the year before to 1/12 of the current year)
IT system	DiVA
Responsibility for reporting the basic data	The University Library

Data reporting	BI system
-----------------------	-----------

MEASUREMENT **Total number of high-rated publications**

Measurement	Number of articles and artistic productions that conform to the requirements for LTU's higher publication support
Unit of measure	Quantity, integer
Formula	Number of publications and artistic productions with approved for higher economic remuneration.
Definition of the formula input factors	Number of articles in peer reviewed international journals and publication series that are available in the Danish and Norwegian authority lists of high ranked journals (level 2), or in journals included in Web of Science. Conference papers are not included. Also artistic productions that occurred in a context that has a <i>high international reputation</i> , according FFN's criteria.
Measurement time	Annually (publications registered up until 1/12, i.e. including articles from the 2/12 the year before to 1/12 of the current year)
IT system	DiVA
Responsibility for recording the basic data included in the measurement	The University Library
Data reporting	BI system

MEASUREMENT **Number of publications per teacher with scientific or artistic competence**

Measurement	Number of articles/artistic productions per teacher with scientific or artistic competence
Unit of measure	Quantity, one decimal
Formula	The measurement "Total number of publications" is divided by the number teachers with scientific or artistic competence.
Definition of the formula input factors	Publications according to measure Total number of publications. Teacher with scientific or artistic competence – same definition as in the measure Proportion of teachers with scientific or artistic competence.
Measurement time	Annually (publications registered up until 15/12, i.e. including articles from the 16/12 the year before to 15/12 of the current year)
IT system	DiVA
Responsibility for recording the basic data included in the measurement	The number of articles and productions – The University Library The number of teachers – Division of Human Resources
Data reporting	BI system

MEASUREMENT **Cost per published article**

Measurement	Cost per published article/artistic production
Unit of measure	Thousand SEK
Formula	Total research income divided ny the measurement

	“Total number of publications”
Definition of the formula input factors	Research funding = activity codes = 30 + 39 (see the measurement Share assignment funding). Total publications, according to the measurement “Total number of publications”
Measurement time	Annually (publications registered up until 15/12, i.e. including articles from the 16/12 the year before to 15/12 of the current year)
Responsibility for recording the basic data included in the measurement	Research funding – Accounting and Financial Management Unit The number of articles and productions - The University Library
Data reporting	Education and Research Planning Unit

INDICATOR Degrees in third cycle education

MEASUREMENT The number of issued doctoral degrees

Measurement	Number of issued doctoral degree
Unit of measure	Quantity, integer
Formula	Number of issued doctoral degrees during the calendar year
Definition of the formula input factors	- The number of degrees is not necessarily the same as the number of dissertations or thesis defence during the year. A degree is counted when the diploma has been issued.
Generic follow-up measure	The measure has the same definition as the generic measure “Number of third cycle degrees”.
Measurement time	Annually (31/12)
IT system	Ladok
Responsibility for recording the basic data included in the measurement	Student Administration Unit
Data reporting	BI system

1.2 Division of responsibilities

The following units within Professional Services (VSS) are responsible for the indicated data. The data must be reported in IT source systems (e.g. Agresso, Primula, DiVA) as soon as possible after the turn of the year, but no later than January 31 (financial data with deadline February 7).

The indicator measures are calculated in the university's BI system according to the definition of the measures (the calculations are made in the Power BI application, which retrieves data from the university's data bank). The exceptions being the economic measures, the number of budgeted full-time employees and the cost per publication, which are calculated by the responsible expert unit.

Quantitative data is compiled by the Education and Research Planning Unit in one report per department and subject during the month of February. Updates in the IT source systems that takes place after export of measurements from the BI system to reports will not be visible in the reports. Data in the report files is assembled once a year and no retrospective updating of data in the report files is done (late reported data, however, has an impact in the Power BI application).

Responsible unit within VSS	Data or measurement ¹
Accounting and Financial Management Unit & Unit for Local Administration – ETKS/HLT/SBN/SRT/TVM	Accumulated surplus or deficit
Accounting and Financial Management Unit & Unit for Local Administration – ETKS/HLT/SBN/SRT/TVM	Economic result for the year
Accounting and Financial Management Unit & Unit for Local Administration – ETKS/HLT/SBN/SRT/TVM	External funding volume
Accounting and Financial Management Unit & Unit for Local Administration – ETKS/HLT/SBN/SRT/TVM	Total volume research funding (external plus internal funding)
Accounting and Financial Management Unit & Unit for Local Administration – ETKS/HLT/SBN/SRT/TVM	Budgeted full-time workers in teaching (first and second cycle)
Division of Human Resources	Correct (updated) positions, subject affiliations and employment percentage for all employees
Units for Local Administration – ETKS/HLT/SBN/SRT/TVM	Registration of admission of doctoral students and doctoral students' activity and form of subsistence in Ladok
The University Library	The issuing of doctoral degrees

¹ Definition of terms, see Appendix I.1 Definition of indicator measurements.

Appendix II - Templates for self-assessment of research subjects

The self-assessment is an important complement to the collected indicator data and mandatory from 2020 onwards. In the self-assessment the Head of subject is requested to:

- (1) comment on the outcome of indicator data,
- (2) account for the quality, relevance and impact of the research (including collaboration with the surrounding society),
- (3) account for the connection between research and education (how the subject ensures quality in first and second cycle education), and
- (4) account for the subject's renewal and contribution to the university's vision³.

Template for the self-evaluation text, including focus questions for evaluation of (2) the research quality, relevance and impact, (3) the subject's connection to education and (4) the subject's renewal and contribution to the university's vision, is determined by the responsible faculty board ahead of each evaluation cycle (general template below).

The request to outline the research subject's relevance and significance is a response to national guidelines agreed by SUHF in 2019.⁴ According to the SUHF's framework, higher education institutions must ensure that they continuously collect and analyses information with a bearing on the quality and relevance of research as a basis for quality development, priorities and strategic decisions. Furthermore, in the Swedish Research Council's proposed model for national evaluations of research subjects and thematic areas of research, significance is linked to research impact in society or social benefit, described through case studies (time perspective last five years).⁵

General Template

Self-assessment [Enter name of research subject]

Please write concisely, follow the headings below and respect the word limits.

Part 1 - Goal attainment and competence supply (max 1000 words)

Conditions

Comment on conditions and evaluate goal attainment in terms of indicators:

- External funding
- Composition of the personnel group
Pay particular attention to any imbalances in job categories, age and gender, including recruitment needs
- Doctoral student group composition/funding
- The distribution of supervisory responsibilities of doctoral students among staff
- Significance of the subject for first cycle and second cycle education
Briefly which courses/programs, more details in part 3

Results

Comment the results and evaluate goal attainment in terms of indicators:

- Production of scholarly articles or artistic productions
- Number of doctoral degrees

³ Vision 2030 Luleå tekniska universitet, dnr LTU-1704-2018

⁴ <https://suhf.se/gemensamt-ramverk-for-larosatenas-kvalitetssakring-och-kvalitetsutveckling-av-forskning/>

⁵ Vetenskapsrådets modell för nationella ämnesvisa och tematiska utvärderingar, dnr: 3.2-2018-00113

Part 2 - Quality, relevance and impact of research (maximum 1000 words)

Focus questions defined for each round of evaluation.

Part 3 - Report on the connection between research and education (maximum 500 words)

Focus questions defined for each round of evaluation.

Part 4 - Renewal and contribution to the university's vision (maximum 250 words)

Focus questions defined for each round of evaluation, may be included in part 2 or 3.

Appendix III - Template for the final report for the evaluation of research subjects

The faculty boards summarizes, in April to May (*evaluation years*), their conclusions and recommendations from the evaluation of research subjects in a tabular format, according to the template below. One summary per department and faculty.

General comments:

A summarizing description of the performance of the Department's research subjects, including potential assignments to the Head of department

- ...
- ...

Table: Evaluation of research subjects

Research subject	Feedback/assessment ¹
<i>Chaired professor</i>	
Avd för X Avd chef	
Fo ämne Y ÄF	
Fo ämne Z ÄF	

1 - Summary of each research subject's performance based on the evaluation tools (indicators, self-assessment and dialogues).

Appendix IV – Flow chart



